



# Product Evaluation

DR834 | 0217

Engineering Services Program

*The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).*

*This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.*

*This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.*

*For more information, contact TDI Engineering Services Program at (800) 248-6032.*

**Evaluation ID:** DR-834

**Effective Date:** February 1, 2017

**Re-evaluation Date:** January 2021

**Product Name:** 350 IR Aluminum Glazed Outswing Side Hinged Doors, Zone 3, Level D, Impact Resistant

**Manufacturer:** Kawneer Company, Inc.  
555 Guthridge Court  
Norcross, GA 30092-2503  
(770) 840-6426

**General Description:** This evaluation report is for 350 IR aluminum glazed outswing hinged doors. The aluminum glazed outswing hinged doors are used for commercial curtain wall and storefront installations. This evaluation report includes the following hinged door assemblies:

- Double Door Assembly with Storefront Framing
- Single Door Assembly with Storefront Framing

**Curtain Wall and Storefront:** Curtain wall and storefront framing referenced in this product evaluation report are the IR500; the IR501; and the 1600 System 1. The curtain wall and storefront framing are not part of this product evaluation report. Curtain wall and storefront framing used with these assemblies shall be listed in a separate Texas Department of Insurance product evaluation report

**Product Identification:** A Kawneer label will be affixed to the curtain wall assembly.

**Products Installed in Accordance with Drawing No. 1882T (Large Missile Impact):** The label includes the manufacturer's name (Kawneer); the product name (350 IR Door); that the design pressure and size are per drawing # 1882T; and that the product complies with ASTM E 330-02, ASTM E 1886-05, ASTM E 1996-05, Large Missile Impact, Zone 3-Level D.

**Limitations:****Design Drawings:**

Curtain Wall assemblies complying with the requirements for large missile impact must comply and be installed in accordance with the following drawing:

Drawing No. 1882T, titled "350/500IR Outswing Zone 3 Impact Storefront Doors," Sheets 1 thru 13 of 13, drawing dated 08/11/14, signed and sealed by Warren W. Schaeffer, P.E on Aug, 11, 2014. The stated drawings will be referred to as the approved drawings in this evaluation report.

**Fabrication and Assembly:** Kawneer door systems are fabricated and assembled in the factory and glazed at the jobsite. The approved drawings referenced in this evaluation report indicate the options for the glazing construction.

**Design pressure (DP):**

- The door assemblies for large missile impact have a maximum design pressure rating  $\pm 50$  psf. Refer to approved drawings for specific design pressure requirements.
- If the doors are used with curtain wall or storefront framing, then the design pressure rating of the complete assembly shall be the lesser of the allowable design pressure rating for the curtain wall or storefront framing and the doors in this evaluation report

**Impact Resistance:**

**Products Installed in Accordance with Drawing No. 1882T:** These assemblies satisfy TDI's criteria for protection from windborne debris in both the **Inland I** and **Seaward** zones. These assemblies passed an impact criteria equivalent to Missile Level D specified in ASTM E 1996-05. Install these assemblies at any height on the structure that does not exceed the assembly's design pressure rating. These assemblies do not require protection with an impact protective system when installed in areas that require windborne debris protection.

**Installation Instructions:**

**General:** Prepare and install the assembly in accordance with the manufacturers recommended installation instructions. Detailed installation instructions and drawings are available from Kawneer Co.

**Installation:**

**Wall Framing Construction:** Mount the aluminum curtain wall system to several types of wall framing construction. The types of wall framing construction allowed include:

- concrete (minimum compressive strength: 3,000 psi)
- wood dimension lumber (minimum Southern Yellow Pine)
- steel studs (minimum 16-gauge, 50 ksi), and
- steel (1/8" thick, A36 (minimum  $F_y = 36$  ksi)).

**Fastener Requirements:**

- Refer to the approved drawings for the anchor layout and notes.
- Refer to the approved drawings for the minimum embedment depths for the fasteners and the minimum edge distances (minimum distance fastener must be from the edge of the substrate material) for the fasteners.

**Note:** Keep the manufacturer's installation instructions at the job site during installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.